EasyCtrl®
Guangzhou Easyctrl Intelligent Technology Co., Ltd.

PLC-18-150-350 **18W**

Dimmable:
Max. 0.1%-100%

RoHS CE **Class 2**

| PLBUS Push DIM | PWM dimming | No Flicker IEEE 1789 | Multi-current | Short-circuit protection | Overload protection | Over-temperature protection |

Features

- PWM digital dimming technology delivers perfect visual experience.
- Dimming range: 0~100%, LED dimming starts from 0.1%.
- Utilizes PWM control – one channel for brightness adjustment, another for color temperature tuning.
- Built-in microcontroller for setting dimming curves and fade times.
- Multi-current & wide voltage input, compatible with LEDs of various power ratings.
- Supports group control: up to 32 groups.
- Signal reverse connection protection: one signal in the same line can be reversed without affecting other power operations.
- Overload, over-temperature, and short-circuit protection with automatic recovery.
- Complies with SELV (Safety Extra-Low Voltage) standards.
- Suitable for indoor Class I, II, and III luminaire applications.

Product Description

This PLBUS intelligent lighting controller utilizes Lihe Micro's high-performance power line communication chip and adheres to the PLBUS protocol, enabling intelligent control through power lines. The controller outputs PWM dimming signals, compatible with standard lighting fixtures on the market, making it widely suitable for smart lighting applications in settings such as malls, hotels, exhibition halls, and classrooms. The application of PLBUS power line communication technology in smart lighting offers advantages such as no need for additional wiring, low cost, and convenient installation and maintenance.

Technical Parameters

	Model	PLC-18-150-350
Output	Operating Voltage Range	9-42Vdc
	Maximum Output Voltage	42Vdc
	No-Load Output Voltage	42Vdc
	Operating Current Range	150-350mA
	Load Power Range	18W
	Flicker Level	No Flicker
	Dimming Range	0~100%,LED dimming starts from 0.1%
	PWM Frequency	14.4KHz
	Current Accuracy	±3%
	Ripple and Noise	≤2V
Input	Dimming Interface	PLBUS
	Input Voltage	100-220Vac
	Frequency Range	50/60HZ
	Input Current	<0.3A
	Power Factor	PF>0.85/230V ac(full load)
	Efficiency (Typ.)	>77%
	Surge Current	Cold start 20A@230Vac
	Surge Immunity	L-N:2kV
	Leakage Current	<5mA/230Vac
Environment	Operating Temperature	ta:45℃ tc:75℃
	Operating Humidity	ta:20~95%RH, No Condensation
	Storage Temperature / Storage Humidity	-40~80℃,10~95%RH
	Temperature Coefficient	±0.03%/℃(0-50)℃
	Vibration Resistance	10-500Hz, 2G, 12 minutes per cycle, 72 minutes on each X, Y, Z axis
Protection	Over-temperature protection	Based on the PCB temperature exceeding the limit (≥110℃), the current output can be intelligently adjusted or shut down, with automatic recovery.
	Overload protection	When the load power is ≥102%, the current will be reduced and can automatically recover.
	Short-circuit protection	The output circuit will automatically shut down in the event of a short circuit and can automatically recover.
Safety regulations and electromagnetic specifications	Dielectric strength	Input to output: 3750Vac
	Insulation resistance	Input to output:100MO/500VDC/25℃/70%RH
	Safety standards	IEC/EN61347-1,IEC/EN61347-2-13
	Flicker testing standards	IEEE 1789
Others	Product dimensions	160×38×24mm(L×W×H)
	Packaging dimensions	PE bag packaging
	Product weight	98g±10g

Product Dimensions

160mm

38mm

24mm
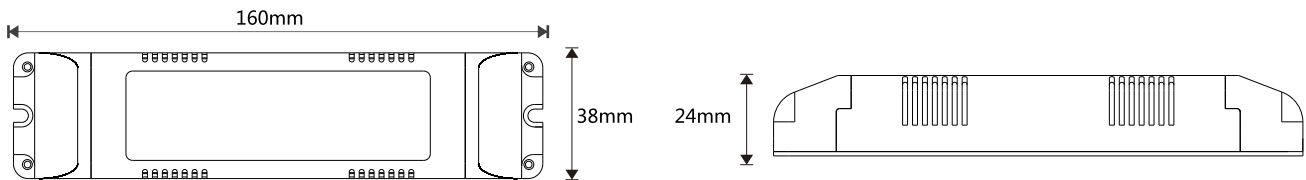
LED Current Selection

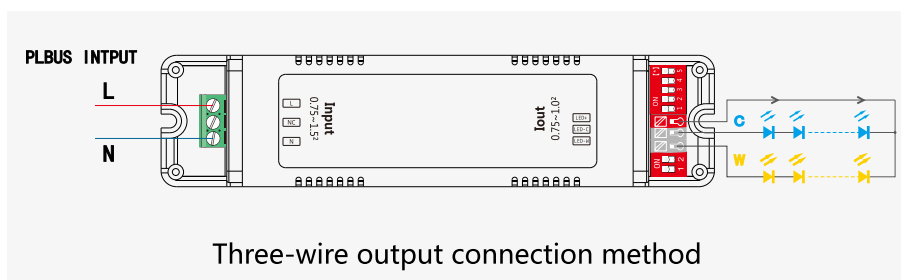| DIP Switch		⊤⊤	⊤⊥	⊥⊤	⊥⊥	⊤ ⊥
PLC2-18-150-350	Current Output	150mA	200mA	300mA	350mA	ON OFF
	Voltage Output	9-42V	9-42V	9-42V	9-40V	
	Power Output	1.35-6.3W	1.8-8.4W	2.7-12.6W	3.15-14W	

DIP Switch Quick-Select 4-Step Current Settings

∗ Assuming each LED has a voltage of 3.2V: With a power supply output voltage range of 9-42V, it is possible to connect 3 to 13 LEDs in series. The maximum number of LEDs that can be connected in series should be determined based on the actual voltage of the LEDs.

Group Settings

(Figure 1)The dip switch has a total of 5 positions, numbered 1, 2, 3, 4, and 5. Each position represents a value of 1, 2, 4, 8, and 16, respectively. When switched to the ON position, the values of the ON positions are added together, and then 1 is added to get the group address of the device. For example, address 11 is calculated as: (2 + 8) + 1 = 11, and address 30 is calculated as: (1 + 4 + 8 + 16) + 1 = 30. The group address range is from 1 to 32.Multiple controllers can have the same group address, and a single PLBUS can connect a maximum of 128 18W controllers. Note: When all dip switches are in the OFF position, it represents group address 1

ON   [*]

1 2 3 4 5

1 2 4 8 16

(Figure1)
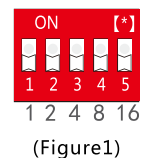
Connection Application Diagram

PLBUS INTPUT

L

N

Input 0.75~1.5²

Iout 0.75~1.0²

C

W

Three-wire output connection method

Fault Analysis

Encountered Issues	Solutions
The light does not turn on	1.Check whether the input and output wiring of the product is connected according to the instructions in the manual, and confirm that the terminal connections are secure. 2.Verify whether the input voltage of the product is normal, whether there is voltage present, and whether the applied voltage meets the product's rated voltage. 3.Check whether the selected matching luminaire parameters conform to the product's rated voltage and current, and confirm whether the luminaire is defective.

Precautions

● This product must not be operated while powered on. Please have it installed and debugged by qualified professionals. Read the product manual carefully before installation.

● This product is not waterproof and should be protected from direct sunlight and rain.

● Do not stack this product during use.

● Good heat dissipation conditions will extend the product's lifespan. Please install the product in a well-ventilated environment.

● Please check all parameters of the product to ensure they meet the application requirements.

● For safety reasons, it is recommended to use 0.75 - 1.5mm² PVC or rubber cables for input and 0.75 - 1.0mm² for output. Ensure all connections are secure to prevent overheating or poor contact, which could lead to accidents.

● Before powering on for debugging, make sure all wiring is correct to avoid product damage due to incorrect connections.

● In case of malfunction, do not disassemble the product yourself. If you have any questions, please contact the supplier.

The content of this manual is subject to change without notice.
If there are any discrepancies between the content and the features of the product you are using, the actual product shall prevail.
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http://www.easyctrlgz.com